CALIFORNIA
ENERGY
COMMISSION

Annual
Project Activity Report
to the Legislature

RENEWABLE
ENERGY
PROGRAM

CALIFORNIA ENERGY COMMISSION

COMMITTEE REPORT

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Annual Project Activity Report to the Legislature

CALIFORNIA ENERGY COMMISSION

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Introduction

The *Supplemental Report of the 1999 Budget Act (*Item 3360-001-0381) requires the California Energy Commission (Energy Commission), beginning March 1, 2000 and by each December 1st thereafter, to submit a report to the Legislature on the Renewable Energy Program. The report shall include the following:

> (a) an itemized list – including a project description, grant amount, and proposed outcome measures – for projects awarded funding in the current 2000 (FY), broken down by program area; and (b) an itemized list – including a project description, grant amount, and actual outcome measures – for projects awarded funding in the prior FY, broken down by program area.

In response to this requirement, the Energy Commission is pleased to submit its fourth *Annual Project Activity Report to the Legislature*. The Energy Commission established the reporting period and level of detail covered in this report in consultation with the staff of the Legislative Analyst's Office and members of the California Legislature. As mandated, this report discusses the activities performed, funds encumbered, and payments awarded to projects participating in the Energy Commission's Renewable Energy Program for FY 2001-2002, with reference to FY 2000-2001 for context and comparison.

Summary of Legislation

This section summarizes the legislation covering the Renewable Energy Program, beginning with the legislation mandating the program in 1996 to the most recent legislative changes to the program in 2002 (which do not affect this reporting period).

The Renewable Energy Program was initially authorized through Assembly Bill 1890 (AB 1890, Brulte, Chapter 854, Statutes of 1996). AB 1890 required California's three major investor-owned utilities (IOUs) to collect $540 million from their ratepayers over a four-year period beginning in 1998 to help support renewable electricity-generation technologies and develop a renewable energy market in California.

As mandated by AB 1890, the Energy Commission submitted its *Policy Report on AB 1890 Renewables Funding* (*Policy Report)*[1] to the Legislature in March 1997, with recommendations for allocating and distributing these funds. The *Policy Report* was incorporated into Senate Bill 90 (SB 90, Sher, Chapter 905, Statutes of 1997). Senate Bill 90 directed the Energy Commission to:

> assist the in-state operation and development of existing and new and emerging renewable resource technologies, and secure for the state the environmental, economic, and reliability benefits that development and

continued operation of those new and emerging technology resource facilities will provide.

Senate Bill 90 established the Renewable Resource Trust Fund and directed the Energy Commission to distribute the funds through four distinct accounts as follows:

- Existing Renewable Resources Account
- New Renewable Resources Account
- Emerging Renewable Resources Account
- Consumer-Side Account (the Consumer-Side Account was bifurcated into two sub-accounts: Customer Credit and Consumer Education)

The Renewable Energy Program is comprised of these accounts, each of which is fashioned to support the renewables industry in a unique way. In response to these legislative mandates, the Renewable Energy Program became operational in April 1998. This report covers the activity and status of these accounts for the FY 2001-2002.

Recent Legislative Changes to the Renewable Energy Program

Key pieces of legislation were recently passed that significantly affect the Renewable Energy Program, as summarized below.

In September 2000, the Legislature adopted the Reliable Electric Service Investments Act (RESIA) through the codification of Assembly Bill 995 (AB 995, Wright, Chapter 1051, Statutes of 2000) and Senate Bill 1194 (SB 1194, Sher, Chapter 1050, Statutes of 2000). The RESIA directed, beginning in January 2002, that the three large IOUs collect an amount starting at $135 million per year from their ratepayers and place these funds into the Renewable Resource Trust Fund.

In June 2001, pursuant to the RESIA, the Energy Commission recommended funding allocations and awards to the Legislature in a report titled, *Investing in Renewable Electricity Generation in California (Investment Plan)*[2]. The *Investment Plan* was incorporated into Senate Bill 1038 (SB 1038, Sher, Chapter 515, Statutes of 2002), which Governor Davis signed into law in September 2002. SB 1038 authorizes the Energy Commission to continue implementing the Renewable Energy Program for the next five years and to distribute the Renewable Resource Trust Fund monies collected under the RESIA, beginning in 2003.

The Governor also signed Senate Bill 1078 (SB 1078, Sher, Chapter 516, Statutes of 2002) in September 2002, establishing a Renewables Portfolio Standard (RPS) in California. SB 1078 requires the utilities to increase their procurement of renewable energy resources by at least one- percent per year so that 20 percent of their retail sales are from eligible renewables by 2017. The Energy Commission must, pursuant to SB 1078, develop eligibility requirements for certifying renewable facilities, create a system for tracking renewables purchases and

sales, verify utility procurement compliance, and cover the above-market cost for renewables purchases. The Energy Commission is collaborating with the California Public Utilities Commission (CPUC) and other agencies to implement the RPS under SB 1078.

During October and November 2002, the Energy Commission conducted public hearings to discuss the procedures and guidelines for extending the Renewable Energy Program under the new legislation. The Energy Commission is reviewing public comments and expects to adopt final program guidebooks in 2003.

To minimize further interruptions in funding disbursements, provide the renewable energy industry and its customers with a measure of certainty, and build on the Renewable Energy Program's successes, the Energy Commission will transition to the extended program under the new legislation as seamlessly as possible.

Overview of the Renewable Energy Program

Beginning in 1997 to June 30, 2002, $555.0 million[3] has been deposited into the Renewable Resource Trust Fund. By the end of FY 2001-2002, the Energy Commission disbursed a total of $270.9 million, reflecting account payments to more than 200 renewable energy facilities, more than 84,000 renewable energy customers, and 14 consumer outreach organizations. Almost $258.5 million is encumbered for projects not completed as of June 2002. Funds disbursed by account are summarized below:

- 275 existing renewable energy generation projects received more than $151.7 million from the Existing Account;
- Over $18.4 million was disbursed to 33 on-line projects from the New Account, with $236.2 million encumbered for planned new renewable projects;
- 2,872 completed on-site renewable projects in IOU service areas received $39.4 million4 from the Emerging Account. An additional $35.3 million remained encumbered as of June 30, 2002 for 1,567 systems;
- In December 2001, 81,280 customers were purchasing renewable energy and receiving customer credits, bringing the total funds paid from the Customer Credit Subaccount to over $58.8 million; and
- The Consumer Education Subaccount funded 12 consumer outreach grants totaling $860,577, and two consumer education contracts totaling $3.2 million. A solicitation for $620,000 in grant funding for education projects was released in early 2002.

By the end of FY 2001-2002, program incentives had helped existing renewable facilities remain competitive or return to service, representing 466 MW of renewables capacity. When completed, the new renewable projects participating in the program will bring nearly 1,300 MW of new renewables capacity to California’s electricity grid. Photovoltaic (PV) and wind energy systems installed on homes and businesses provide over 7.2 MW of capacity, in addition to more than 8.5 MW in various stages of construction. Among customers who entered into direct access contracts with alternative providers nearly 100 percent made renewable electricity purchases and were provided customer credits.

Educating Californians about the benefits of renewable energy fosters demand for renewable energy and helps consumers make informed energy decisions. Consumers statewide have received this information via public service announcements (PSAs), events, radio and television, newspaper, and magazine articles.

Further, the Energy Commission collaborated with the California Franchise Tax Board to develop the new solar tax credit guidelines pursuant to Senate Bill 17 2X (SB 17 2X, Brulte, Chapter 12, Statutes of 2001). In partnership with the California Power Authority, the Energy Commission launched the solar schools program, designed to encourage PV installations at California public schools.

Over the duration of the program, the Energy Commission has reallocated funds in the Renewable Resource Trust Fund among accounts in a manner consistent with SB 90 and the Energy Commission's *Policy Report.*[5] Table 1 shows the initial allocation for each account in 1998, and the reallocation of funds as of June 2002.

Table 1 - Renewable Resource Trust Fund Initial Account Allocation and Reallocations under SB 90

	Initial Allocation (1998)		Reallocations (a/o June 2002)	
Account	**% of Total**	**($ Millions)**	**% of Total**	**($ Millions)**
Existing Account	45%	$243.0	28%	$151.8
New Account	30%	$162.0	43%	$232.0
Emerging Account	10%	$54.0	16%	$85.2[6]
Customer Credit	14%	$75.6	12%	$65.6
Consumer Education	1%	$5.4	1%	$5.4
Total Fund	**100%**	**$540.0**	**100%**	**$540.0**

Table 2 shows fund disbursements from each account during FYs 2000-2201 and 2001-2002. With the exception of the Customer Credit Subaccount, each account's expenditures were larger in FY 2001-2002 than in the previous FY.

Table 2 - Renewable Resources Trust Fund Disbursements by Fiscal Year ($ Millions)

	FY 2000 - 2001	FY 2001 - 2002
Existing Account	$2.266	$19.011
New Account	$5.971	$10.210[7]
Emerging Account	$4.512	$32.766
Customer Credit Subaccount	$21.104	$4.767
Consumer Education Subaccount	$0.670	$1.545
TOTAL	**$34.523**	**$65.520**

As indicated in this report, we continue to implement activities described in the program *Guidebooks* and have been successful in realizing the Legislature's goals, as outlined in SB 90.

Report Organization

This section provides a snapshot of the Renewable Energy Program as of June 30, 2002, including how the funds are currently allocated among accounts. The remainder of this report is organized into five chapters that relate to the accounts in the Renewable Energy Program as follows:

- Chapter 1 covers the Existing Renewable Resources Account
- Chapter 2 covers the New Renewable Resources Account
- Chapter 3 covers the Emerging Renewable Resources Account
- Chapter 4 covers the Customer Credit Subaccount
- Chapter 5 covers the Consumer Education Subaccount

Each chapter provides an overview of each account and covers significant activities and events that occurred in the twelve months of FY 2001-2002, including information regarding funds encumbered or awarded to participating projects. To provide a context for the reader, project information during the previous FY (July 2000 through June 2001) is provided where applicable. Maps are included after the "Endnotes" section that provides the project-specific details for each account by Senate and Assembly districts. To keep printing costs to a minimum, the project-specific details are provided in the account-specific appendices on the Energy Commission's website at [www.energy.ca.gov/renewables/documents]. The *Annual Project Activity Report on the Renewa*ble *Energy Program Appendix* is also available in hardcopy by calling (800) 555-7794.

Chapter 1
EXISTING RENEWABLE RESOURCES ACCOUNT

This chapter discusses the Existing Renewable Resources Account, covering the significant activities during FY 2001-2002. The chapter is arranged into the following sections:

- Account Overview
- Account Activity and Status
- Expenditures

Account Overview

The Existing Renewable Resources Account was initially allocated $243 million to provide assistance to existing renewable energy facilities in California during the state's transition to a deregulated electricity market.

To be eligible for funding from the Existing Account, a facility must meet the following conditions:

- be physically located within the State of California;
- have come on-line before September 26, 1996;
- be registered with the Energy Commission as a renewable supplier; and
- meet the other requirements listed in the *Existing Renewable Resources Account Guidebook, Volume 1*.[8]

The Existing Account is divided into three tiers according to technology, with Tier 1 receiving the largest amount of funding and Tier 3 receiving the least. Table 3 lists the amounts of funding originally allocated to the tiers and the technologies within each. The Energy Commission's *Policy Report* discusses the rationale for the amount of funding allocated to each tier. The funding within each tier declines every year to encourage renewable facilities to become competitive in the deregulated energy market, which is the primary goal of the program.

Table 3
Original Funding Allocations ($ millions) by Year

Technology		1998	1999	2000	2001	Overall
Tier 1	Biomass, Waste Tire, Solar Thermal	$43.20	$36.45	$31.05	$24.30	$135.0
Tier 2	Wind	$21.60	$18.90	$16.20	$13.50	$70.2
Tier 3	Geothermal, Small Hydro, Digester Gas, Landfill Gas, and Municipal Solid Waste	$12.15	$10.80	$8.10	$6.75	$37.8
All Technologies		**$76.95**	**$66.15**	**$55.35**	**$44.55**	**$243.0**

To receive funding from the Existing Account, a facility must first register as a renewable energy supplier with the Energy Commission. Once registered, and after the Energy Commission approves the funding eligibility, a facility submits monthly invoices and is paid based on the amount of eligible generation submitted. Payments are calculated based on the lowest of three possible incentive rates, on a cents-per-kWh basis, as listed below:

- The difference between the target price and the market-clearing price or "short-run avoided cost" (SRAC),[9]
- A pre-determined cents per kWh cap, or
- The funds-adjusted price[10] (a modified funds available divided by generation submitted, accounting for differences in the SRAC among the three IOUs)

Table 4 shows target prices and caps for the Existing Account to date.

Table 4 - Target Prices and Caps (cents per kWh)

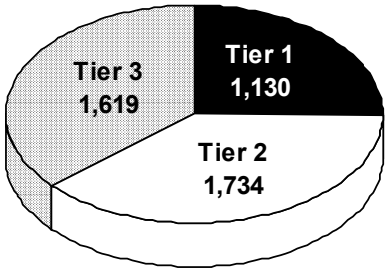
		1998	1999	2000	2001
Tier 1	Target Price	5.0	4.5	4.0/5.0*	5.0*
	Cap	*1.5*	*1.5*	*1.0*	*1.0*
Tier 2	Target Price	3.5	3.5	3.5	3.5
	Cap	*1.0*	*1.0*	*1.0*	*1.0*
Tier 3	Target Price	3.0	3.0	3.0	3.0
	Cap	*1.0*	*1.0*	*1.0*	*1.0*

* In October 2000, the Energy Commission approved an increase in the target price for Tier 1 facilities from 4.0 to 5.0 cents per kWh starting with November 2000 generation. This change was made to ensure that biomass facilities stay on-line through at least the end of 2001 and encourage several other facilities that were off-line at the time to restart before summer 2001.

Account Activity and Status

As of June 30, 2002, the Energy Commission registered 378 facilities as existing renewable suppliers; of these, the Energy Commission found 275 to be eligible for payments from the Existing Account. The eligible facilities represent over 4,466 megawatts (MW) of capacity. Figure 1 illustrates the breakdown of capacity among the three tiers.

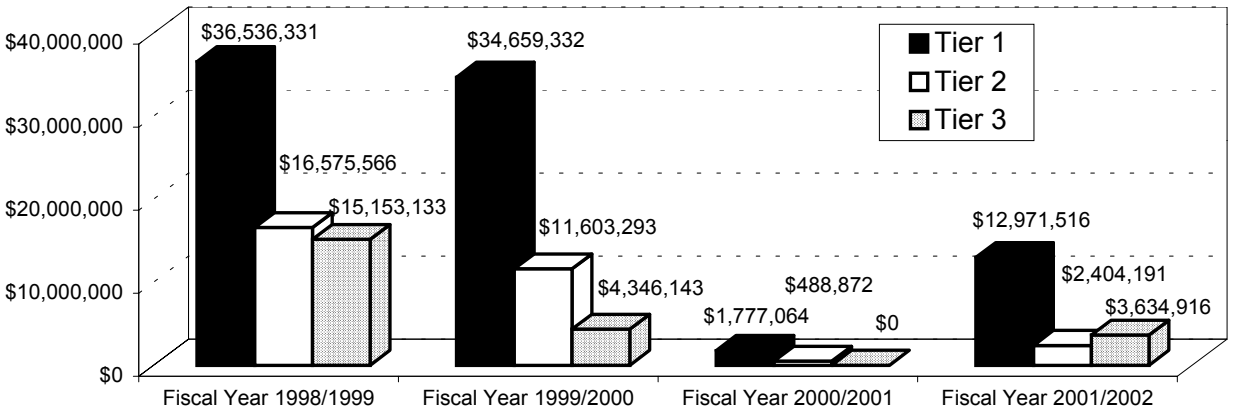
Figure 1
Existing Account Capacity
(MW)



The Energy Commission distributed the first payments from the Existing Account in March 1998 and payments to eligible facilities have continued through February 2002. The Existing Account guidelines provided a payment schedule only through December 2001, after which time the Energy Commission suspended payments from the Existing Account. Accordingly, the Energy Commission has not made payments on 2002 generation from the Existing Account.

Figure 2 illustrates the breakdown of payments from Tiers 1, 2, and 3 for the last four FYs.

Figure 2
Payments from Existing Account
July 1, 1998 to June 30, 2002



From the beginning of the program through June 30, 2002, the Energy Commission made payments totaling over $151.7 million from the Existing Account. During FY 2001-2002, existing facilities received approximately $19 million in payments, compared with the previous FY, 2000-2001, when these facilities received $2.3 million in payments. This increase in payments from the 2000-2001 FY is due to a drop in SRAC prices back to historical levels during FY 2001-2002. Had the Energy Commission not suspended payments

for generation after December 2001, the SRAC prices from March 2002 through June 2002 would have been low enough for facilities in the Existing Account to receive payments in the first half of 2002.

Table 5 summarizes information for the Existing Account for FY 2000-2001 and FY 2001-2002.

Table 5 - Existing Account Summary
July 1, 2000 to June 30, 2002

		Fiscal Year 2000/2001	Fiscal Year 2001/2002
Tier 1	Number of Projects	38	43
	Capacity (MW)	1,016	1,130
	Generation (GWh)	2,473	1,729
	Payments	$1,777,063.54	$12,971,516.00
	Average Incentive Rate * (Payments/Generation)	$0.0007	$0.0047
Tier 2	Number of Projects	88	90
	Capacity (MW)	1,734	1,734
	Generation (GWh)	2,624	1,512
	Payments	$488,871.79	$2,404,191.28
	Average Incentive Rate (Payments/Generation)	$0.0002	$0.0012
Tier 3	Number of Projects	140	142
	Capacity (MW)	1,610	1,619
	Generation (GWh)	8,547	3,232
	Payments	$0.00	$3,634,915.50
	Average Incentive Rate (Payments/Generation)	$0.0000	$0.0007
All Tiers	Number of Projects	266	275
	Capacity (MW)	4,360	4,466
	Generation (GWh)	13,644	6,473
	Payments	$2,265,935.33	$19,010,622.90
	Average Incentive Rate (Payments/Generation)	$0.0002	$0.0018

* The incentive rates were calculated by dividing the total payments made by the Energy Commission by the total amount of generation submitted by facilities.

Because of high SRAC prices, payments were not made for every month in FY 2001-2002. Although many facilities continued to submit monthly generation through the end of FY 01/02, facilities participating in the Existing Account often elect not to submit invoices when SRAC prices are high. As a result, the average incentive rates shown in Table 5 may be

somewhat inaccurate because the generation values are probably lower than actual industry activity. (The generation data for 2001-2002 do not include any generation submitted after February 2002.)

In previous FYs, the Energy Commission approved the reallocation of up to $80 million to fund the New Account's second and third auctions, and $15 million to the Emerging Account for increasing rebate levels to satisfy the requirements of Assembly Bill 29X (AB 29X, Kehoe, Chapter 8, Statutes 2001). In September 2001, the Energy Commission redirected $6.2 million, which had been approved for reallocation to the New Account, to the Emerging Account. The $6.2 million in funds were part of the up to $80 million that had been reallocated to the New Account, but were not needed because of the manner in which the second and third auction were devised. An additional $3.8 million was later determined not to be needed for New Account projects, and will thus be left in the Existing Account to meet its funding requirements.

Expenditures

Payments from the Existing Account decreased in each of the first three FYs. The drop in payments from FY 1998-1999 to FY 1999-2000 was due to a modest increase in the SRAC prices. The dramatic decrease in payments from 1999-2000 to 2000-2001 was due to a very large increase in SRAC prices during FY 2000-2001. In fact, SRAC prices were as high as 17 cents per kilowatt-hour (cents/kWh) during that year. The increased payments in 2001-2002 reflected a return to historical SRAC levels.

Since the end of the 2001-2002 FY, SRAC prices have remained low. However, many of the facilities receiving payments under SRAC have accepted amendments to their contracts so that they will receive an average of 5.37 cents/kWh for five years. No Tier 2 or Tier 3 facilities with these contracts would be eligible for Existing Account funding because the contract rate exceeds their target prices.

Tier 1 facilities with these contracts may or may not be eligible for funding depending on the final guidelines established pursuant to SB 1038. If Tier I facilities are deemed eligible, then their payments would be minimal because of the small difference between the contract rate and the target price. The Energy Commission is currently in the process of developing guidelines for the Existing Account, but does not expect them to be finalized until February 2003.

The facility-specific details on payments and generation can be found in the *Annual Project Activity Report on the Renewable Energy Program, Appendix A* on the Energy Commission's website at [www.energy.ca.gov/renewables/documents].

CHAPTER 2
NEW RENEWABLE RESOURCES ACCOUNT

This chapter discusses the New Renewable Resources Account, covering the significant activities during FY 2001-2002. The chapter is arranged into the following sections:

- Account Overview
- Account Activity and Status
- Auction Results
- Status of On-Line Projects
- Potential Penalties for On-Line Projects
- Status of Projects Not Yet On-Line
- Funding Award Extensions
- Potential Funding Reallocations

Account Overview

Senate Bill 90 initially allocated $162 million to the New Renewable Resources Account to support new renewable power plants in California. A "new" facility, as defined by SB 90, is one that began generating electricity after September 26, 1996.

Funds in this account are allocated through competitive auctions, in which developers of prospective renewable energy projects compete for funding in the form of production incentives paid out over a maximum of five years. Prospective developers submit incentive bids for the amount of funding assistance required for building their projects, up to a cap of 1.5 cents/kWh. Incentive bids must include an estimate of the first five years of electricity production, proof of site control, and a detailed project description that includes a list of necessary project permits and permitting agencies. In addition, bidders are required to have applied for their project permits; otherwise they must submit a bid bond equal to 10 percent of their total proposed award. Bid bonds are returned once developers have applied for their permits.

To determine the total potential award to each project, the incentive bid is multiplied by the estimated electricity generation for the first five years the project is operating. These incentive bids are ranked from lowest to highest according to the incentive amount requested, and the incentive bids are accepted until all funds are awarded or until all bids are accepted, whichever comes first. If the final bid accepted exceeds available auction funds, the funding award for that bidder (or bidders, in the case of a tying incentive bid) is reduced to match the available funds. Winning bidders must pass a series of milestones that include applying for

and receiving permits, beginning and completing construction, and coming on-line as certified by a professional engineer.

Once projects begin generating electricity, they submit monthly invoices to the Energy Commission showing the amount of renewable electricity generated, verified by a metering statement from a third-party entity. Projects are paid their incentive bid for each kWh of renewable generation for the first five years of electricity production, but are never paid for more than the original estimated production contained in their bid. For additional details on funding and eligibility, see *Volume 2A: New Renewable Resources Account Guidebook*.[11]

Account Activity and Status

The results of the New Account auctions and the status of winning projects are discussed below. For descriptions and detailed project information, refer to Tables B-1 and B-2 in the *Annual Project Activity Report on the Renewable Energy Program, Appendix B* on the Energy Commission's website at [www.energy.ca.gov/renewables/documents].

Auction Results

The Energy Commission has held three New Account auctions since the program began in 1998. In the first auction in 1998, the Energy Commission awarded the entire $162 million originally allocated to the New Account. In 2000 and 2001, second and third auctions were held in response to market developments surrounding California's electricity crisis in 2000 and 2001. Because market prices for electricity were high, a large amount of rollover funding became available in the Existing Renewable Resources Account. To encourage the development of new renewable generating capacity to help with anticipated peak electricity demand, the second and third auctions awarded up to $40 million each year in rollover funding from the Existing Account. The second and third auctions offered bonuses for projects coming on-line by June 1 of each year to encourage facilities to come on line as quickly as possible. These auctions imposed penalties for on-line dates after July 2 of each year.

Table 6 summarizes the winners in the three New Account auctions by technology. The summary does not include eight projects that have cancelled their funding awards. As noted in Table 6, when all winning projects have come on-line, the New Account auctions will have facilitated the development of almost 1,300 MW of new renewables capacity for California's electricity customers.

Table 6 - Summary of All Winning Bidders

Technology	Number of Projects	Capacity (MW)	Average Incentive (¢/kWh)	Conditional Award
Biomass	2	11.30	1.35	$3,787,902.00
Digester Gas	1	2.05	1.39	$1,148,209.50
Geothermal	4	156.90	1.28	$80,331,617.60
Landfill Gas	21	70.32	1.15	$25,177,889.64
Small Hydro	5	34.24	1.19	$5,346,223.63
Waste Tire	1	30.00	0.72	$7,232,413.43
Wind	39	976.08	0.74	$113,136,279.90
Total	**73**	**1,280.89**	**0.93**	**$236,160,535.70***

* The conditional funding awards for winning bidders in the second and third auctions includes potential bonuses for early on-line dates and does not reflect potential penalties for later on-line dates. The encumbered balance for these winners will be adjusted downwards once the projects come on-line. The actual amount of funds allocated to the New Renewable Resources Account is $232 million, as shown in Table 1.

In the second auction, the Energy Commission received 28 bids requesting more than $93 million in incentive funds. For these bids, the average incentive bid overall was 0.89 cents/kWh, while the average incentive requested by winning bidders was 0.59 cents/kWh, both well below the 1.5 cent/kWh cap. Seventeen bids were selected as winners, with projects ranging in size from one to 200 MWs. Represented technologies were biomass, landfill gas, small hydro, and wind. The final four bids accepted had requested equal incentive amounts. The auction rules state that bids with equal incentive payment requests are added as a group to the list of winning bidders, as if they are a single bid. If that group of bids causes expected total pay-outs to exceed the available funds, those bidders are given the option of either withdrawing from the auction or having their awards reduced by the amount necessary to match the available funds. All four bidders chose to accept lowered funding awards, resulting in an amount that was 75 percent of their original request.

In the third auction, the Energy Commission received 48 bids requesting more than $140 million in incentive funds. The average incentive requested overall was 0.99 cents/kWh, while the average incentive requested by winning bidders was .75 cents/kWh, again well below the 1.5 cent/kWh cap. Nine bids were selected as winners, with projects ranging in size from five to 80 MW. Represented technologies were small hydro, waste tire, and wind. In the final winning bid in the third auction, the expected total payments exceeded the available funds, thus the final bidder's award was reduced by 27 percent to correspond with the available funds.

Status of On-Line Projects

By July 2002, nearly half (45 percent) of the 73 projects with active funding awards are on-line and generating electricity, including 33 projects (197.5 MW) from the first and second auctions. Seventeen of these projects (73.6 MW) came on-line in FY 2001-2002.

In FY 2001-2002, payments were made to 31 on-line projects. Total payments to these facilities from the beginning of the Program through June 30, 2002 are shown in Table 7.[12] A summary of projects not yet on-line is provided in Table 8.

Table 7 - Summary of Total Payments as of June 30, 2002

Technology	MWs On-Line	# of Projects	% of Total MWs	Payments FY 01/02	Total Payments To Date	Total Funds Encumbered	% Of Encumbered Funds Paid
Biomass	11.30	2	100%	$254,664.84	$254,664.84	$3,787,902.00	7%
Digester Gas	0	--	0%	0	0	$1,148,209.50	0%
Geothermal	59.00	2	38%	$5,163,822.20	$9,089,195.00	$80,331,617.60	11%
Landfill Gas	27.55	9	39%	$2,673,338.37	$6,618,643.61	$25,177,889.64	26%
Small Hydro	11.25	2	33%	$10,366.90	$10,366.90	$5,346,223.63	0%
Waste Tire	0	--	0%	0	0	$7,232,413.43	0%
Wind	88.40	18	9%	$2,108,103.79	$2,465,315.96	$113,136,279.90	2%
Total	**197.50**	**33**	**15%**	**$10,210,296.60**	**$18,438,186.31**	**$236,160,535.70**	**8%**

Potential Penalties for On-Line Projects

As part of the auction process, project participants are required to estimate the amount of electricity that their project will generate over the five-year funding period. To discourage auction participants from encumbering excess funds by overestimating their generation, auction winners are required to generate a minimum of 85 percent of their estimated generation over the first three years of operation.

If a project developer is having difficulty and must reduce the project's generation, then the developer must notify the Energy Commission so that its payments can be reduced, thereby avoiding a penalty. These projects will have their eligible generation reduced to reflect the average annual amount actually generated during the first three years; furthermore, they will receive a 25 percent reduction in their cents/kWh incentive for the final two years of payments.

During FY 2001-2002, the Energy Commission evaluated on-line projects to determine whether or not they were on track to meet the 85 percent requirement. Seven projects (that have been generating for two to three years) were not meeting the 85 percent requirement, and these have received warning letters outlining the potential penalty for under-generation. We will continue to evaluate the performance of on-line projects and revise funding awards as necessary to reflect any reduced generation amounts or incentive penalties.

Status of Projects Not Yet On-Line

Forty projects from the three auctions are not yet on-line. Table 8 summarizes the capacities and estimated on-line dates of these projects by FY.

Table 8 - Summary of Projects Not Yet On-Line By Fiscal Year

	FY 02/03		FY 03/04		FY 04/05		FY 05/06		FY 06/07		TOTAL	
Technology	**#**	**Size (MW)**	**#**	**Size (MW)**	**#**	**Size (MW)**	**#**	**Size (MW)**	**#**	**Size (MW)**	**#**	**Size (MW)**
Biomass	--	--	--	--	--	--	--	--	--	--	--	--
Digester Gas	1	2.05	--	--	--	--	--	--	--	--	1	2.05
Geothermal	--	--	--	--	1	49.90	1	48.00	--	--	2	97.90
Landfill Gas	4	15.24	6	24.53	1	1.00	1	2.00	--	--	12	42.77
Small Hydro	1	21.00	1	0.99	--	--	--	--	1	1.00	3	22.99
Waste Tire	1	30.00	--	--	--	--	--	--	--	--	1	30.00
Wind	9	310.83	9	247.05	3	329.80	--	--	--	--	21	887.68
Totals	**16**	**379.12**	**16**	**272.57**	**5**	**380.70**	**2**	**50.00**	**1**	**1.00**	**40**	**1,083.39**

Most of the New Account projects were proceeding on schedule with minimal delays until late 2000, when the utilities' financial difficulties began to strain California's electricity market. New electricity generating projects found it difficult, in some cases impossible, to secure power purchase agreements, and many projects were unable to obtain the financing needed to begin constructing facilities, purchasing equipment, or both. Even projects with power purchase agreements with the utilities and the California Department of Water Resources (DWR) had difficulty obtaining financing because the utilities and DWR were not considered credit-worthy at that time.

Permitting was a second factor in project delays. Many local permitting agencies were downsizing as a result of the economic downturn, which led to a severe backlog in the permitting process. In addition, many agencies were unfamiliar with the unique issues surrounding the construction of renewable energy technologies.

For certain technologies, a third factor for delays was equipment availability. Many equipment manufacturers build on an as-ordered basis; thus, they may be tied up with other orders if a developer does not order equipment in their timeframe. For wind technologies in particular, missing a 45-day window of opportunity could delay the project for up to a year because of limited turbine manufacturing capability.

The recent passage of a statewide RPS is expected to help stimulate demand for renewable technologies. Under such a standard, utilities and other obligated entities must purchase a minimum percentage of their retail sales from renewable sources. This requirement may increase the availability of power purchase agreements, which should help projects resolve financing issues and make progress toward coming on-line.

Funding Award Extensions

Senate Bill 90 originally required new renewable projects to come on-line before January 2000, to receive their entire funding award over the five-year payment period. Projects coming on-line later than January 1, 2002 risked having their payments reduced, incurring penalties, or having their conditional funding awards cancelled. However, AB 995 and SB 1194 amended the law. Projects participating in the New Renewable Resources Account may now come on-line as late as January 1, 2007, provided that the Energy Commission makes a finding that the delay is beyond a project developers' control.

In November 2001, the developer of two geothermal projects from the first auction petitioned the Energy Commission to extend the funding awards for two projects in accordance with AB 995/SB 1194. On January 9, 2002, based on information from the project developer, the Energy Commission extended the projects' on-line dates to December 31, 2005.

In April 2002, the Energy Commission revised the *Overall Guidelines*[13] to establish a formal petition process for developers applying for funding award extensions. In FY 2001-2002, six project developers submitted petitions for extensions because of delays they claim were beyond their control. The Energy Commission will issue decisions on those petitions in FY 2002/2003. The Energy Commission anticipates fourteen additional petitions for extension from projects that experienced delays.

Potential Funding Reallocations

The Energy Commission reduced the funding awards for four projects in the second auction and one project in the third auction to match the available auction funds. In May 2001, the project developer of three of these five projects petitioned the Energy Commission to have its awards raised to the full bid amount if funds became available, such as through cancellations or penalties. The developers for the other two projects have similarly indicated interest in having their awards augmented. The staff intends to modify the program guidelines to give the Energy Commission the discretion to make such augmentations and will consider any petitions from affected projects during FY 2002/2003.

Cancellations

Eight projects have cancelled their funding awards, representing 23 MW of capacity and $9.8 million in funding awards. The reasons for these cancellations included inadequate fuel supplies, difficulties securing power purchase agreements, high operating and maintenance costs, and in one case legal difficulties.

In March 2000, the funding awards from the first auction for two cancelled projects were reallocated to Cabazon Wind Partners LLC, a winning bidder whose award was reduced to correspond with the available funds. A third project from the first auction was cancelled during FY 2000-2001, and the remaining five projects (four from the first auction, and one from the second auction) were cancelled during FY 2001-2002. Funding from all cancelled projects except the first two will return to the Renewable Resource Trust Fund.

Winning bidders in the New Account auctions must maintain contact with the Energy Commission project manager through phone calls and regular written progress reports. If the developer does not, then the Energy Commission may terminate the award.

During FY 2001-2002, the Energy Commission lost contact with the developers of four wind projects from the first auction. Enron Wind Development Corporation owned three of these projects, and Painted Hills Wind Developers, an Enron Wind Development Corporation affiliate, owned the fourth. After repeated attempts to establish contact, the Energy Commission notified project developers of its intent to cancel their funding awards if contact was not re-established within 10 days. Enron Wind Development Corporation and Painted Hills Wind Developers did not contact the Energy Commission until after the Energy Commission scheduled cancellation of the four funding awards at its April 3, 2002 Business Meeting.

These developers subsequently submitted a petition for reconsideration in accordance with the program guidelines. The Energy Commission removed the proposed cancellation from the Business Meeting agenda, pending a decision on the petition. The petition was found to be incomplete, and the developers were notified in writing where the petition was deficient. As of June 30, 2002, the developers had not submitted the information necessary to make the petition complete. Once a petition is deemed complete, the Energy Commission has 30 days to make a determination.

The cancellation of these four projects is complicated by the fact that Enron, the parent corporation, is in the midst of bankruptcy proceedings. The Energy Commission's legal counsel is consulting with bankruptcy law experts to determine if the Energy Commission can cancel these projects, should the developers' petition for reconsideration be denied.

CHAPTER 3
EMERGING RENEWABLE RESOURCES ACCOUNT

This chapter discusses the Emerging Renewable Resources Account, covering the significant activities during FY 2001-2002. The chapter is arranged into the following sections:

- Account Overview
- Account Activity and Status
- Projects in IOU Service Areas
- Projects in Publicly-Owned Electric Utility Service Areas (POEU)
- Technical Support

Account Overview

The initial allocation of $54 million in the Emerging Renewable Resources Account funds the Buydown Program, which provides rebate payments to buyers, sellers, lessors, or lessees of eligible electricity generating systems that are powered by emerging renewable energy resources. Emerging renewable energy technologies eligible to participate in the Buydown Program are small wind systems (10 kilowatts (kW) or less), PV systems, solar thermal electric systems, and fuel cell technologies that utilize renewable fuels.

Payments from the Buydown Program are intended to reduce the net cost of generating equipment using emerging renewable technologies, thereby stimulating substantial sales of such systems. Increased sales are expected to encourage system manufacturers, sellers, and installers to expand their operations and ultimately reduce their costs.

Another goal of the Buydown Program is to encourage the siting of small, reliable distributed generating systems throughout California in locations where the electricity is both needed and consumed. To be eligible for a Buydown Program rebate, systems must be located on the premises of customers of California's IOUs.[14] The system must be sized so that the electricity it produces offsets part or all of the electrical needs of the premises.

Although the Buydown Program is open to emerging renewable generating systems of all sizes,[15] it was designed to favor small systems, such as those typically used by residential or small commercial and agricultural customers. At least 60 percent of the initial $54 million in program monies must be awarded to systems of 10 kW or smaller in rated output. Fifteen percent of the program funds were reserved for systems rated at 10 to 100 kW or less, with the remaining 25 percent available for systems larger than 100 kW.

The program requirements were developed to encourage the use of quality equipment and to attract applicants who were serious about purchasing and installing a system. Applicants for funding from this account must submit a rebate reservation request to the Energy Commission that describes the system they are purchasing. The system's major components must be on the Energy Commission's list of certified equipment. Once a reservation is accepted, applicants of 10kW or smaller systems have up to nine months to complete their system installations. Applicants with larger systems have up to 18 months to install their systems. The Energy Commission will not release rebate funding until the applicant provides proof of installation and a five-year system warranty.

For additional details about eligibility, see *Volume 3: Emerging Renewable Resources Account Guidebook.*[16]

Account Activity and Status

During this reporting period, applications for rebate reservations from the Emerging Buydown Program escalated to 250 per month in the spring of 2001 from an average of 30 per month during 2000 (an eight-fold increase). In March 2001, the Energy Commission decided to maintain the $3-per-watt level for small systems (rather than lowering the rate, a step the Energy Commission had initially intended to take). The original Buydown Program structure included declining rebate levels, from $3 to $1 per watt, which were designed to encourage a decrease in system costs over time. Beginning in the fall of 2000, however, the energy crisis sparked a dramatic increase in consumer interest in the Buydown Program, with a commensurate rise in program activity during FY 2001-2002.

Several pieces of legislation were enacted in response to the challenges of California's energy crisis, particularly to assist in meeting summer peak load demand. In April 2001, Governor Davis signed AB 29 X,[17] which included a number of significant energy incentives, such as:

- Adding $22 million to the Buydown Program for small systems,
- Providing $8 million in rebates for municipal utility customers installing small PV systems,
- Giving the Energy Commission authority to increase Buydown rebate levels, and
- Expanding net metering provisions for systems up to one MW.

Pursuant to AB 29X, in May 2001, the Energy Commission approved an increase in rebate levels to $4.50 per watt or 50 percent of the installed system costs, whichever is less, for all systems. This rebate increase was an additional incentive for California's residents and business owners, who were becoming increasingly interested in securing a reliable and cost-predictable energy source as a result of California's electricity crisis.

Senate Bill 90 specifies that three percent ($16.2 million) of the funds not used from other Renewable Resource Trust Fund Accounts was to be transferred to the Emerging Renewable Resources Account for buydown rebates. In September 2001, the Energy Commission opted

to move those monies into the Emerging Account, applying the same percentage allocation among small, medium, and large systems as with the initial $54 million.

Projects in Investor-Owned Utility Service Areas
(SB 90 Funding)

During this reporting period, the Energy Commission paid almost $30.374 million to rebate applicants for 2,160 completed projects participating in IOU service areas. These projects represent 7,213 kW of capacity from PV and wind systems.

In addition to completed systems, the Energy Commission approved 1,567 reservations in these areas during FY 2001-2002, which are in various stages of development. The Energy Commission encumbered approximately $35.885 million for these pending projects, which represent 8,522 kW of capacity. Table 9 includes information regarding the Buydown Program rebate reservations and payments in IOU service areas for FY 2001-2002, along with FY 2000-2001 for comparison.

Table 9 - Rebate Reservation and Payment Activity (IOU Service Areas)

	7/1/00 to 6/30/01	7/1/01 to 6/30/02
Systems Completed during Fiscal year		
Number of Systems	385	2,160
Total Capacity (kW)	1,478	7,213
Funds Paid*	**$4,322,940**	**$30,373,788**
Funds Remaining Encumbered at end of Fiscal Year		
Number of Systems	1,415	1,567
Total Capacity (kW)	8,328	8,522
Estimated Funds Encumbered	**$25,256,682**	**$35,337,68****
Total Paid During Fiscal Year or Remaining Encumbered at end of Fiscal Year		
Number of Systems	1,800	3,727
Total Capacity (kW)	9,807	15,735
Total Funds Encumbered and Paid	**$29,579,622**	**$65,711,469**

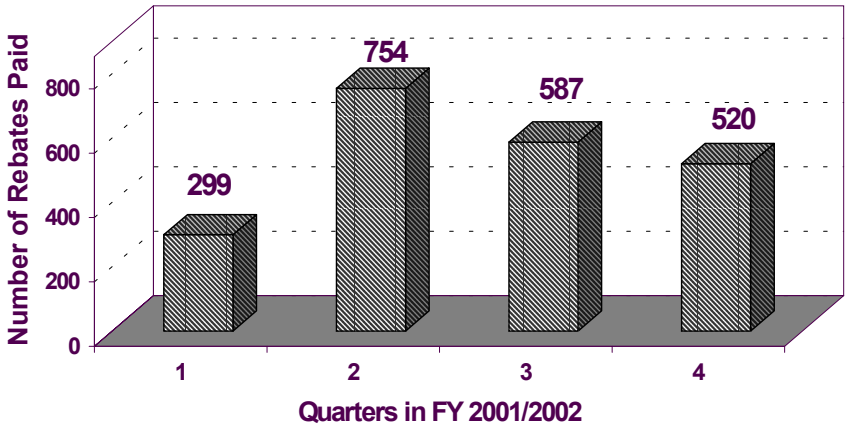
*The actual funds paid during FY 2000-2001 was $4.512 million, and actual funds paid during FY 2001-2002 was $32.766 million. The differences between these amounts and the amounts in Table 9 reflect the lag time between date of data entry and date of disbursement.

**Encumbrances as of 6/30/02 are not available for some projects due to changes in application status between the end of the FY and preparation of this report. For such projects, the average rebate/watt for rebates paid during FY 2001-2002 ($4.21) was used to estimate the funds encumbered as of 6/30/02. See Appendix C for details.

Although projects awarded rebate funding have nine or eighteen months to claim payment, depending on the size of the project, many projects are completed much sooner. The average number of rebates paid per quarter in FY 01/02 was 540, and the actual number of rebates paid per quarter is illustrated in Figure 3. The number of projects completed between October and December of 2001 was more than double the number completed in the previous quarter of FY 2001-2002. This change reflects the jump in the number of reservation requests received per quarter beginning in the spring of 2001. It also reflects staffing level adjustments to accommodate the increased number of rebate requests and claims for payment.

For an itemized list of projects in IOU service areas that were awarded rebates from the Emerging Renewables Buydown Account during FY 2001-2002, refer to the *Annual Project Activity Report on the Renewable Energy Program, Appendix C* on the Energy Commission's website at [www.energy.ca.gov/renewables/documents]. *Appendix C* includes project descriptions, amount of funding reserved/paid, and energy capacity.

Figure 3
Quarterly Buydown Rebates Paid (IOU Service Areas)
July 1, 2001 – June 30, 2002
(SB 90 funding)



Projects in Publicly-Owned Electric Utility Service Areas (AB 29X Funding)

In December 2001, the Energy Commission adopted guidelines to administer the $8 million in rebate funds provided by AB 29X for grid-connected small PV systems (10 kW and smaller). These systems must be located in local POEUs. During the 2001-2002 FY, the Energy Commission paid a total of $53,321 to four applicants for completed projects participating in these service areas, representing 13 kW of capacity from PV systems. In addition, the Energy Commission encumbered $170,947 for 12 projects with 38 kW of capacity, in various stages of development in these areas.

Several factors account for the slow start in activity in these AB 29X projects. First, the guidelines were not published until the middle of the FY 2001-2002. Second, there was a time delay among fund availability, awareness in the community, and a commitment on the part of a purchaser to invest in a PV system. Finally, the electricity rates in local POEUs tend to be lower than rates in IOU service areas, thereby reducing the economic viability for these ratepayers to purchase a PV system.

For an itemized list of project activity using AB 29X funds for systems in POEU service areas, see the *Annual Project Activity Report on the Renewable Energy Program, Appendix C.*

Technical Support

The Energy Commission staff works closely with technical support contractors and their subcontractors to help identify market conditions and barriers to increasing customer purchases of emerging renewable systems. This work has yielded several projects to help consumers make informed purchase decisions and ensure optimal performance from their renewable technology generating systems.

The Cleanpower Estimator™ is an interactive web-based tool that allows consumers to estimate, among other things, how installing a PV or small wind systems could affect their electricity costs. The estimator, licensed from Cleanpower Research, is useful to both residential and non-residential customers; it can be found on the Energy Commission's website at [www.consumerenergycenter.org/buydown]. In February 2002, the license for the Cleanpower Estimator™ was extended until 2004. The Renewable Energy Consumer Education staff worked with Cleanpower Research to revise the estimator, including customizing the graphical interface and improving the chart selection and configuration showing economic feasibility.

Senate Bill 90 requires the Energy Commission to “spot check” a sample of the systems installed with Buydown Program funding to determine if the systems comply with program requirements. During FY 2001-2002, the technical support contractor, Regional Economic Research (RER), conducted an audit of 37 systems that received Buydown Program funding to verify that systems were properly installed and functioning. This audit brings the total number of systems verified over the duration of the program to 132. The RER submitted its final On-Site Verification Report to the Energy Commission on June 30, 2002. The audit found no cases of significant noncompliance, but six out of the 132 involved substitution among eligible components and minor variations in system sizes.

During site verification visits, the RER also tracked participant feedback and concluded that] "information necessary to establish realistic system performance expectations and to assess actual performance is lacking." Further, "Lack of reliable system performance data increases the risk that program participants will be disappointed with the actual output of their system." According to the RER, some of the systems (12 out of 113) were installed in mildly to partially shaded areas, thereby reducing the amount of electricity produced. Additionally, all

of the 18 wind systems less than one kW in size were located near obstructions (e.g., homes, trees), which caused turbulence in the wind resource and reduced the amount of energy they produced.

In November 1999, the Energy Commission and the United States Department of Energy began a jointly funded monitoring program of PV and small wind systems. In June 2001, the RER reported that actual monitored capacities of the 24 renewable distributed generation systems in the program (PV and wind) ranged from 50 to 91 percent of rebated system sizes, with an average capacity of 73 percent of rebated system size. Annual energy production for the PV systems in the study ranged from 459 to 2,053 kWh/kW, with an average of 1,300 kWh/kW. The RER concluded that, "[W]hile this does not represent evidence of systematic incidence of performance problems, information concerning the difference should be shared with program participants to reduce the likelihood that they will be dissatisfied with their system's performance." The Energy Commission is continuing to carry out the on-site system performance and net household energy monitoring tasks for a small sample of currently monitored systems.

To meet the increased demands on the PV industry and on the officials who inspect the installed systems, the Energy Commission provided funding support for several types of training through the RER and its subcontractors. During the 2001-2002 FY, Endecon Engineering held 10 two-day training sessions on installing PV systems in compliance with California building codes. Endecon Engineering also conducted seven workshops on code-compliant PV systems for building officials, along with several retailer-specific training sessions that focused on reviewing and recommending installation practices. The Energy Commission expects to continue funding future training sessions.

CHAPTER 4
CUSTOMER CREDIT SUBACCOUNT

This chapter discusses the Customer Credit Subaccount, covering the significant activities during FY 2001-2002. This chapter is arranged into the following sections:

- Subaccount Overview
- Subaccount Activity and Status
- Change in Direct Access
- Change in Number of Customers
- Change in the Number of Products and Providers
- Generation Side
- Customer-Demand Side

[As noted before, SB 90 established the Consumer-Side Account, which was bifurcated into the Customer Credit Subaccount and the Consumer Education Subaccount.]

Subaccount Overview

The $75.6 million initially allocated to the Customer Credit Subaccount is intended to foster market demand for renewable electricity by offering financial incentives to renewable energy providers. By passing the customer credit along to their customers, eligible renewable providers can compete with conventional electricity providers. The Customer Credit Subaccount involves many players, including direct access customers, electric service providers, and renewable energy generators and wholesalers. For details about eligibility and funding, see *Volume 4: Customer Credit Subaccount Guidebook*.[18]

The customer credit is essentially a rate discount in cents/kWh for eligible renewable electricity purchases. The Energy Commission distributes these funds to providers who deliver eligible energy to qualifying customers. The providers pass these funds on to their customers, based on the customers' electricity consumption as metered. Eligible customers must reside within the utility service territories of Pacific Gas & Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E) and Bear Valley Electric Service Company. The only eligible customers are those who participate in the direct access market and purchased energy from a registered renewable provider, instead of their default utility distribution company.

Customers are categorized into three separate classes: 1) residential, 2) small commercial, and 3) non-residential, non-small commercial. Non-residential, non-small commercial customers, who are referred to as “other” or “large customers” in this report, include large commercial, industrial, agricultural, and public lighting customers.

The large customers are subject to a cap of $1,000 per customer per year and collectively to a $15 million cap for cumulative payments from the Customer Credit Subaccount over the duration of the program. The $15 million cap was reached in April 2001, ending the availability of funding for these customers.

To become eligible for the customer credit, electric service providers register themselves and their eligible products with the Energy Commission. A renewable energy product is typically a mix of renewable energy; for example, a product may be 50 percent renewable and 50 percent "California mix."[19] Only in-state renewable generation is eligible for the customer credit[20]. Wholesalers or power pools may also register with the Energy Commission to become registered renewable wholesalers, although they are not eligible for funding.[21]

The Energy Commission makes monthly payments from the Customer Credit Subaccount to registered renewable providers based on data submitted in their Monthly Performance Reports (MPRs). The MPR includes data on the generation source of energy offered by providers and on sales to customers. The data provided in MPRs are summarized in this report.

Subaccount Activity and Status

The Customer Credit Subaccount is closely tied to industry developments and was thus affected by California's electricity crisis beginning in late 2000. However, the structure for implementing the program remained relatively unchanged through December 2001, as described above.

During FY 2001-2002, the direct access market continued to decline in response to California's energy crisis, and activity in the Customer Credit Subaccount program slowed proportionately. Because the guidelines for the Subaccount provided a payment schedule only through December 2001, the Energy Commission did not make customer credit payments on 2002 activity. Consequently, the information provided for FY July 2001 through June 2002 is limited to Customer Credit data on activity through December 2001. The number of customers and providers participating in the program has decreased, although some customers continued to receive renewable electricity from registered electric service providers after July 1, 2001.

The change in direct access and changes in the number of customers, products, and providers are discussed in detail below. For additional details, refer to the *Annual Project Activity Report on the Renewable Energy Program, Appendix D* on the Energy Commission's website at [www.energy.ca.gov/renewables/documents].

Change in Direct Access

The Customer Credit program is predicated upon consumers' ability to purchase renewable energy through direct access contracts, and this consumer option was suspended on

September 20, 2001. Table 10 summarizes the status of consumers' right to choose electric service providers over the last two FYs.

Table 10 - Status of Direct Access Contracts

Time Period	Consumers Have the Right to enter a Direct Access Contract	Changes in the Right to Enter a Direct Access Contract	Direct Access Contracts Continue to be Honored
July 2000 to December 2000	yes	No change	yes
January 2001 to June 2001	yes	CPUC required to suspend direct access	yes
July 2001 to September 19, 2001	yes	CPUC required to suspend direct access	yes
September 20, 2001 through June 2002	no	CPUC suspends direct access for new customers	yes*

*Consumers who had direct access contracts in place prior to September 20, 2001 may continue to be served through those contracts. Direct access customers purchasing eligible products continued to receive customer credit through December 2001.

On February 1, 2001, the direct access market became subject to closure with the passage of Assembly Bill 1X (AB 1X, Keeley, Chapter 4, Statutes of 2001). Assembly Bill 1X directed the CPUC to suspend the right of retail end-use customers to purchase energy, renewable or otherwise, from direct access contracts, but it did not specify the suspension date. After AB 1X passed, the CPUC continued to honor direct access service requests and allowed new customers to sign direct access contracts with providers. Most direct access service requests, however, were actually requests to return customers to their default utility.

On September 20, 2001 the CPUC suspended the direct access market so that no new customers could enter into direct access contracts.[22] Although the CPUC decided not to suspend direct access retroactively, it reserved the right to suspend direct access contracts entered into after July 1, 2001. To date, those customers who already had contracts in place prior to September 20, 2001 may continue to be served through the direct access market. Consequently, the Customer Credit Subaccount provided credits through December 2001 for those customers who had contracts in place prior to the suspension date and who continued to meet program requirements.

Change in Number of Customers

About 159,000 residential customers received the customer credit in July 2000, compared to less than 67,000 residential customers receiving customer credits and continuing to be served by registered electric service providers one year later. The number of residential customers

receiving the customer credit actually increased from July 2001 to December 2001, which is likely due to the lag time of processing direct access service requests that were submitted through September 20, 2001. Direct access service requests take approximately six to eight weeks to process. Table 11 shows the change in the number of residential customers receiving the customer credit.

From July 2000 through June 2001, effectively 100 percent of the customers in the direct access market received the customer credit, with the exception of large customers who were no longer eligible. The dominance of renewable energy in the total direct access market indicates that the Customer Credit Subaccount program was a driving factor for the choices offered to those consumers. This trend continued through the remainder of 2001.

Table 11
Residential Customers Receiving the Customer Credit
July 2000-June 2002

Month/Period	Number of Residential Customers	Percent Change for Six-Month Period
July 2000	159,000	NA
December 2000	161,000	1%
July 2001	66,823	-58%
December 2001	70,638	6%
June 2002*	NA	NA

***** Since no payments have been made on 2002 activity, data on the number of residential customers are not available from January 2002 through June 2002.

Change in the Number of Products and Providers

At the end of 2001, a total of 29 providers offering 48 registered renewable energy products participated in the customer credit program. An indicator of market activity for the customer credit program is the number of registered providers. However, it is more instructive to study the registered providers who are actively serving customers because providers can maintain registration status without actively serving customers. Table 12 illustrates this, along with the number of products that exited the market during the last two FYs.

As shown in Table 12, between July 2000 and June 2001, 14 providers (with a total of 18 products) exited the market, while six providers continued to serve customers; no new providers registered with the Energy Commission during that period. From July 2001 through June 2002, one provider registered an additional product, and one provider (with one product) exited the market. As of December 2001, when payments from the Customer Credit Subaccount were suspended, there were five active providers, although most had returned a large portion of their customer base and energy load to the default utility by that time.

Table 12
Registered and Active Renewable Providers and Products

Customer Credit Activity	July 2000-June 2001	July 2001-June 2002
Number of providers registered and active in the market	20	6
Number of providers that exited the market	14	1
Number of products that exited the market	18	1
Total providers registered at the end of the fiscal year and actively serving customers	**6**	**5**

Renewable providers left the market for a variety of reasons stemming from the high wholesale electricity prices experienced in 2000. Some of the reasons for providers leaving the market included the following:

- Difficulty securing energy contracts,
- Problems in becoming unsecured creditors to SCE Company and PG&E Company,
- Cash flow problems,
- The demise of the California Power Exchange (PX)[23] in January 2001, and
- Uncertainty regarding potential changes to market rules.

Some providers also left the market, or returned some of their customers to their default utilities, in response to the end of customer credit funding for large customers.

The number of products registered with the Energy Commission, which registered providers actively marketed, was identical at the close of the past two FYs. This is shown in Table 13, along with a breakdown of the percentage of the electricity product that is renewable. As illustrated, the majority of products offered in the Customer Credit Subaccount are 100 percent renewable.

Table 13
Available Products and their Renewable Proportion

Percentage Renewable	<50%	50%	100%
July 2000-June 2001	3	3	13
July 2001-June 2002	3	3	13

A discussion follows of Customer Credit Subaccount activity, aggregated for all active providers and products for FY 2001-2002, including FY 2000-2001 for comparison. Provider-specific information is not available because several market participants have requested

confidentiality for the data that they submit to the Energy Commission. The Energy Commission is honoring their requests while they are under consideration. The generation side of the market is discussed first, followed by the customer demand side.

Generation Side

The energy resources used to generate the electricity that is eligible for the customer credit are geothermal, biomass, small hydro, landfill gas, and wind energy. Table 14 illustrates the relative portion of fuel types used to produce eligible electricity for the FYs 2000-2001 and 2001-2002.

Table 14 - Eligible Generation by Fuel Type

Fiscal Year	Geothermal	Biomass	Small Hydro	Wind	Landfill Gas	Total
July 2000 to June 2001	69%	18%	9%	3%	1%	**100%**
July 2001 to June 2002*	95%	1%	2%	< 2%	< 1%	**100%**

*Data for this FY only covered generation data that were submitted through December 2001 and does not include renewable generation purchased to serve customer load in 2002.

Although geothermal energy dominated the renewable energy market, other renewable sources were also offered. From July 2000 through June 2001, geothermal facilities accounted for 69 percent of the electricity offered for customer credit, with 18 percent from biomass, 9 percent from small hydro, three percent from wind and one percent from landfill gas.

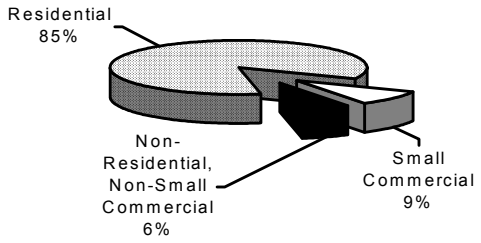
In the six-month period from July 2001 through December 2001, geothermal accounted for 95 percent of eligible purchases. The increased predominance of geothermal is partially due to the decrease in the number of active providers, with those remaining in the market mainly using geothermal purchases. Wind and small hydro contributed less than five percent of total purchases, and biomass and landfill gas represented a very marginal amount of generation used for customer credits during the first half of FY 01/02.

Customer-Demand Side

The following summarizes the number of customers receiving customer credit, the amount of customer credit funds they received, and the amount of eligible renewable electricity consumed. Tables D-1 through D-8 in Appendix D provide detailed monthly historical data for the Customer Credit Subaccount that is illustrated in Figures 4 through 7.

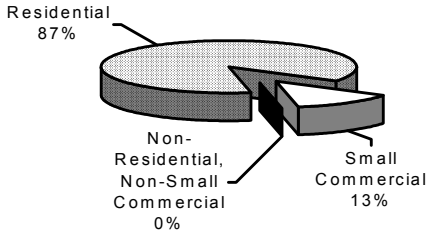
In December 2000, a total of 190,328 customers were receiving customer credit funding from registered renewable providers. The distribution of customers receiving the credit by customer class type is shown in Figure 4.

Figure 4
Number of Customers By Class
As of December 2000



In December 2001, about 70,000 residential customers continued to participate in the Customer Credit Subaccount, less than half of the over 160,000 residential customers that were participating in December 2000. The number of small commercial customers also decreased from December 2000 to December 2001, though not as dramatically as the residential customer class (11,871 small commercial customers in December 2000, 10,642 small commercial customers in December 2001). Figure 5 shows the customer distribution by class as of December 2001. Since the funding cap for large customers was reached in April 2001, this particular class of customers no longer received customer credits, which is reflected in Figure 5 by that class of customers receiving a zero percent distribution.

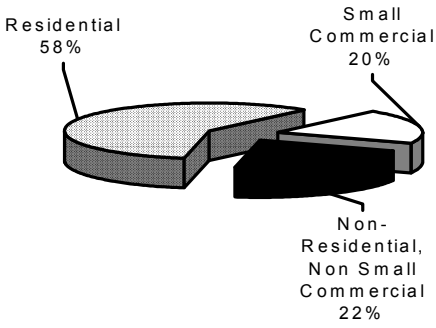
Figure 5
Number of Customers By Class
As of December 2001



The decrease in customer participation resulted from a number of providers leaving the market and returning at least some of their customers to their default utilities. The number of customers receiving the customer credit decreased for each customer class, but the number of residential customers decreased more dramatically than small commercial customers, as discussed above

From July 2000 through June 2001, registered renewable providers served a customer load of 1.67 billion kWh. For the remainder of 2001, total customer load served was 291 million kWh. Load decreased by 36 percent from the previous six-month period. In fact, customer load served in the 2001-2002 FY was significantly smaller than in the previous FY, due in part to the contraction of the direct access market. Another reason for the significant drop in customer load relates to the distribution of customers. Large customers consume the

Figure 6
Customer Load by Class
July 2000- June 2001



greatest amount of electricity. With this class of customers no longer eligible to receive funding, the total amount of customer load decreased significantly.

The small commercial customer class had a slight increase in customer load in the six-month period of July 2001 through December 2001 compared to the previous six-month period. However, for the same period, the residential class experienced a 32 percent load decrease. Figures 6 and 7 show the percentage of the load served to each customer class for the FY July 2000 – June 2001 and the six months of activity for the second FY, July 2001- December 2001.

There is a direct relationship between the customer load and customer credits; the latter is calculated by multiplying the customer load by the credit level current at that time. Consequently, Figures 6 and 7 also represent the distribution of customer credits by customer class. For example, from July 2001 to December 2001, residential customers received 87 percent of the total customer credits, having grown from 58 percent of the total customer credits during the previous FY.

Figure 8 compares the customer credits passed on in the two FYs for each customer class and for all customers collectively. As shown, total customer credits passed on decreased from $16.7 million for the twelve months in FY July 2000 to June 2001, to $2.9 million for the first six months of the FY July 2001 to June 2002. Large customers showed the greatest drop in customer credits received, due to the funding cap being reached for this class of customers in April 2001, which resulted in no payments for these customers from May 2001 through December 2001. Although the residential customer class continued to receive the largest amount of customer credits in FY 01-02, the amount of customer credits received by that class decreased by the same proportion as the small commercial customer class.

Figure 7
Customer Load by Class
July 2001-December 2001

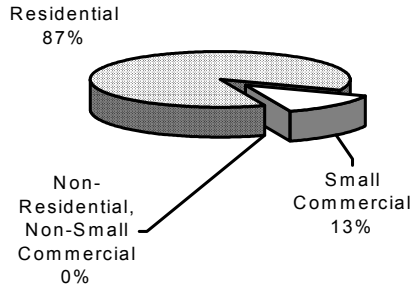
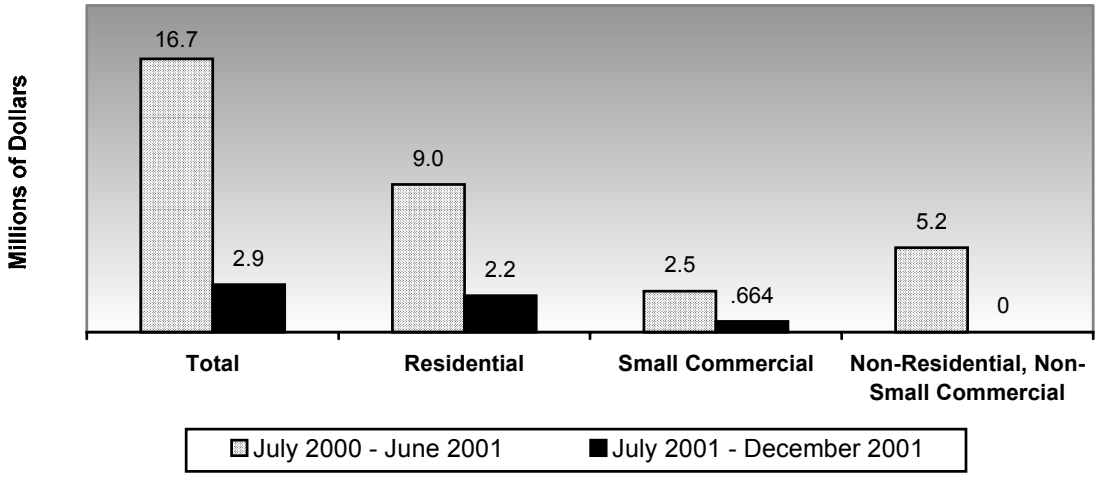


Figure 8
Customer Credits
Comparison of July 2000 - June 2001
with July 2001 - December 2001



Expenditures

Registered renewable providers submit monthly data to the Energy Commission on eligible generation and sales to customers, which are used to calculate payments from the Customer Credit Subaccount. An important factor in the payment calculations is the cents per kWh credit level.

At the start of the program, the Energy Commission set the credit level at the program's maximum amount of 1.5 cents per kWh to encourage market development. Market growth led the Energy Commission to reduce the credit level over the duration of the program as a way to extend the funding availability for customer credits. Since December 2000, the credit level has remained constant at 1 cent/kWh.

Monthly disbursements were very volatile during FY 2001-2002 and the prior FY, but decreased considerably in FY 2001-2002. Changes in the market, along with no payments to large customers, resulted in the Customer Credit Subaccount becoming under-subscribed in year 2001. Combined with activity increasing in the Emerging Renewable Resources Account, the Energy Commission reallocated $10 million from the Customer Credit Subaccount to the Emerging Account in September 2001.

Table 14 summarizes the Customer Credit Subaccount's financial activity for FYs 2000-2001 and 2001-2002. Total funds distributed are lower than funds passed on to customers because

some providers "banked" customer credits. The Energy Commission allows providers to bank credits that are ineligible for payment until they purchase matching eligible generation.

Table 15
Financial Summary by Fiscal Year

	Payments (Millions $)	Funds Remaining (Millions $)*
July 2000 - June 2001	$21.10	$21.51
July 2001 - June 2002	$4.77	$6.74

*In September 2001, $10 million was reallocated from the Customer Credit Subaccount to the Emerging Account.

The market for renewable electricity has been contracting, as shown by the fall in the number of customers receiving the customer credit, the decrease in the renewable electricity consumed, and the decrease in expenditures from the Customer Credit Subaccount. Changes in the market, particularly the suspension of direct access, make new growth in the Customer Credit Subaccount appear unlikely, at least in the near future. Monthly historical data for all customer classes participating in the Customer Credit Subaccount are detailed in Appendix D in the *Annual Project Activity Report on the Renewable Energy Program* on the Energy Commission's website at [www.energy.ca.gov/renewables/documents].

CHAPTER 5
CONSUMER EDUCATION SUBACCOUNT

This chapter discusses the Consumer Education Subaccount, covering the significant activities during the twelve months of FY 2001-2002. This chapter is arranged into the following sections:

- Account Overview
- Account Activity and Status
- Grant Projects
- Public Awareness Campaign
- Other Activities

[As noted above, SB 90 established the Consumer-Side Account, which was bifurcated into the Consumer Education Subaccount and the Customer Credit Subaccount.]

Subaccount Overview

Senate Bill 90 directed that one percent ($5.4 million) of the Renewable Resource Trust Fund be allocated to the Consumer Education Account to promote renewable energy and expand the market by increasing awareness of renewable energy and emerging renewable energy technologies. The Energy Commission implements this directive through its Renewable Energy Consumer Education program. The goals of the program are to:

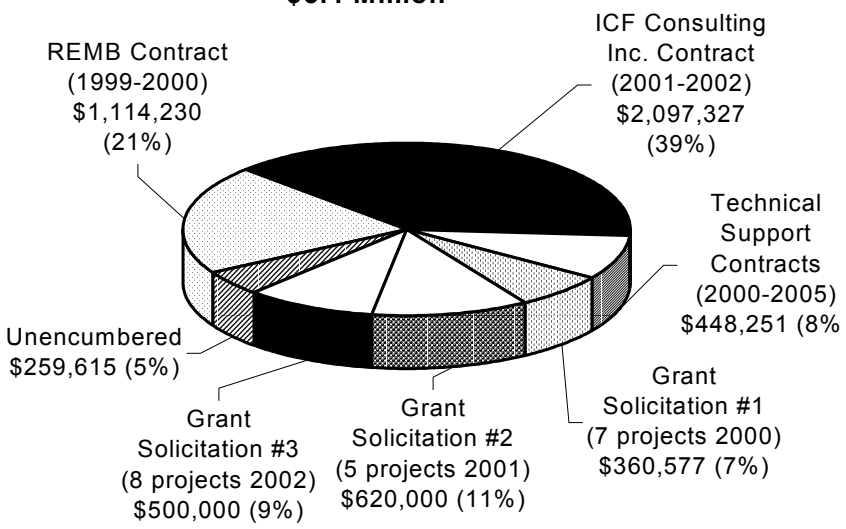
- Raise consumer awareness of renewable electricity generation options and their benefits,
- Increase the purchases of small-scale emerging renewable systems installed on customer premises, and
- Leverage strategic alliances and partnerships with organizations connected to renewable energy in California.

The Energy Commission distributes Consumer Education funds through grants and contracts developed in response to competitive solicitations. Numerous consumer education activities have been implemented under this program to support its goals.

Subaccount Activity and Status

During FY 2001-2002, the Consumer Education staff released one $500,000 grant solicitation, managed 12 grant projects from previous solicitations, and implemented a $2.1 million contract for a Renewable Energy Public Awareness Campaign. Figure 9 shows how the Consumer Education Subaccount funds were distributed during FY 2001-2002. These activities are discussed below, and project descriptions and funding details are provided in the *Annual Project Activity Report on the Renewable Energy Program, Appendix E* on the Energy Commission's website at [www.energy.ca.gov/renewables/documents].

Figure 9
Consumer Education Subaccount FY 2001-2002
$5.4 Million



Grant Projects

Since implementing the Consumer Education program, the Energy Commission has released three Program Opportunity Notices (PONs) for nearly $1.5 million in grant funding to enhance projects that advance the growth of the renewable energy market in California. In response to these solicitations, 127 applications were received; funding constraints permitted that only 20 projects receive grant awards.

Two grant solicitations were released FY 2001-2002, offering $375,000 and $620,000, and resulting in 12 grants that support consumer education and outreach activities for the renewable energy market. Figures 10 and 11 show how funds were distributed among categories in response to these grant solicitations.

During FY 2001-2002, Energy Commission managed the activities in these projects, which are summarized in Tables 15 and 16. These grant project activities include the following:

- Outreach and technical assistance targeted to local governments,
- Educational curricula for schools,
- Assistance to food cooperatives in installing PVs on their stores and outreach to their members about the benefits for renewable energy,
- Media outreach and articles,
- A buying guide for consumers interested in small wind energy systems,
- A targeted marketing campaign for small wind systems,
- Support for the Solar Home Tours,
- *This Renewable House*, a 30-minute video,
- Website development and support, and
- Public service announcements (PSA's).

Figure 10 Grant Funding by Type For Fiscal Year 2000-2001 $374,996

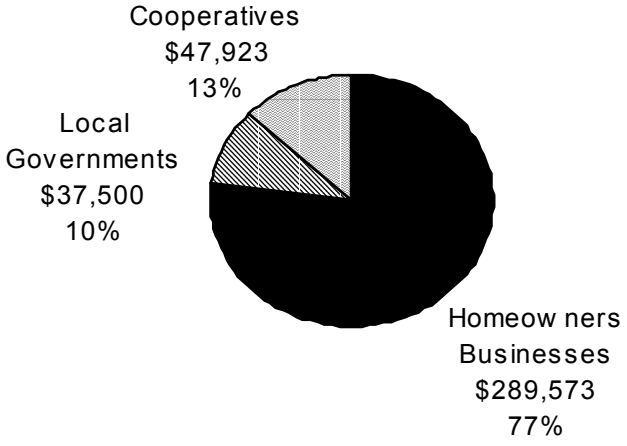
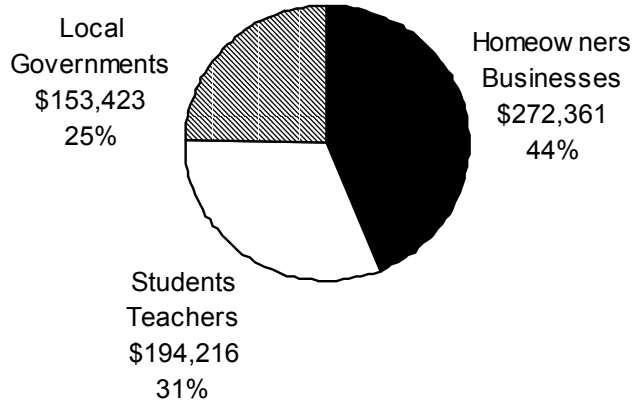


Figure 11 Grant Funding by Type For Fiscal Year 2001-2002 $620,000



The Energy Commission received 52 applications in response to a third grant solicitation that was released in May 2002. Eight grant projects were awarded funding in July 2002; these projects will be discussed in the next Annual Report.

Table 16 - Summary of First Solicitation Grant Awards (2000)

Company Name	Project Description	Funding Award	Match Fund	Project Term
Chico Community Publishing Inc.	Educational **media outreach** program.	$69,178	$34,271 (50%)	9/00 to 10/01
Evergreen Energy LLC	Development and Production of **Small Wind Consumer's Guide**.	$24,650	$6,500 (26%)	11/00 to 12/01
Northern CA Solar Energy Association	**Solar Home Tour** in Northern California.	$11,300	$9,800 (87%)	10/00 to 10/01
Pathfinder Communications	**Articles, website content, and handouts** addressing local governments, urban e-commerce participants, and rural self-reliance early adopters.	$75,000	$57,400 (77%)	10/00 to 10/01
San Diego State University Foundation	**San Diego Region Photovoltaic Education and Outreach Project** - virtual PV clearinghouse & targeted outreach campaign.	$74,980	$33,214 (44%)	10/00 to 10/01
The Rahus Institute	**Renewable Grass Roots Campaign** - posters, flyers, demo kit, interactive display, PV display, media articles, website.	$71,965	$92,500 (129%)	8/00 to 10/01
Twin Pines Cooperative Foundation	**PV and/or Wind for Co-ops** - Installation, Education and Demonstration program.	$47,923	$37,330 (78%)	10/00 to 5/02
TOTAL		**$375,000**	**$269,630 (72%)**	

Table 17 - Summary of Second Solicitation Grant Awards (2001)

Company Name	Project Description	Funding Award	Match Fund	Project Term
Scott Alan Cronk	**This Renewable House** - half-hour filmed program for TV to use a format similar to the PBS show "This Old House," Public Service Announcements, home video version for distribution through Blockbuster and Hollywood video stores free of charge, website content, and presentations.	$176,156	$478,465 (272%)	6/01 to 10/02
The Rahus Institute	**The Solar Series education and energy for schools** - energy curriculum for K-12 class level, facilitate installation of PV on schools and integrate with the curriculum, student fundraising via buy-a-watt approach to help fund the purchase of a system, resource kits such as books, CD, videos, lesson plans, lab equipment, and teacher training seminars.	$112,140	$52,500 (47%)	6/01 to 12/ 02
American Wind Energy Association	**Targeted Small Wind Turbine Marketing** - short-term direct mail marketing program and develop three case studies of successful small wind turbine installations in the areas of Sonoma, Solano, Alameda, Santa Cruz, Kern, San Bernardino, and some parts of Los Angeles (good wind resource available).	$96,205	$ 24,200 (25%)	1/02 to 11/02
Educators For The Environment	**A *Teacher's Guide* and classroom activities** - for Grades 6-12: production and dissemination, bookmarks, survey of students, families and administrators, website page highlighting the guide, flyers.	$82,076	$48,848 (60%)	8/01 to 11/03
Local Government Commission	***Stimulating the Implementation of Renewable Energy Technologies*** by California local governments - promote direct installation on local government facilities, make installation of PV easy and cost-effective, develop expertise for purchasing, permitting, installing, and inspecting PV systems, alert to the availability and immediate cost effectiveness of PV.	$153,423	$93,258 (61%)	8/01 to 2/03
TOTAL		**$620,000**	**$697,271 (113 %)**	

Public Awareness Campaign

In June 2001, the Energy Commission entered into a $2.1 million contract with the ICF Consulting firm to conduct a Renewable Energy Public Awareness Campaign. The contract states that the ICF Consulting team will do the following:

- Develop and present an approach for identifying California consumers most likely to choose renewable energy,
- Develop public awareness advertising messages and strategies to reach those consumers, and
- Implement the campaign while coordinating activities among various entities in the public and private sectors.

Identify Audience

The ICF Consulting staff began by reviewing existing consumer-focused renewable energy market research. They determined that additional research was needed because the energy market had undergone significant changes since the prior research had been conducted. The ICF Consulting staff and their team of subcontractors conducted a controlled quantitative phone survey of 300 California adults in target markets, which was designed to determine the public's awareness of and attitudes toward renewable energy sources. The survey results were used in eight focus groups to test and establish the best strategies for messages and appropriate outreach to educate Californians about renewable energy technologies. Additionally, the ICF team conducted an in-depth telephone survey, targeting 20 homeowners and 10 commercial building owners or managers who have participated in the Emerging Renewables Buydown Program. This research was conducted to isolate the 'tipping points' that influenced consumers to adopt renewable energy.

Define Messages

Consistent messages are at the center of a successful strategic communications program. These messages must address the perceived barriers of the target audiences and move them along the road from awareness to understanding to action. The availability of an attractive rebate and concern for the environment were the main motivators for most of the survey participants in adopting renewable energy. These findings, summarized in a report to the Energy Commission,[24] were used to further refine the messages on renewable energy outreach materials and to guide the following strategy:

- Raise consumer awareness about renewable energy,
- Increase consumer knowledge about the benefits and mechanics of installing renewable energy technologies, and

- Increase renewable energy technology demand: the recommended strategy is to position the Energy Commission as the "one-stop shop" for comprehensive, unbiased information on renewable technology.

Campaign Implementation

The research further revealed that consumers want communications that do not invade their privacy, but simply put the idea in front of them and let them know where they can go to get further information. The ICF Consulting team developed proactive public relations campaign that uses a variety of non-invasive communications vehicles to provide consumers with opportunities to see renewable energy in action, positioned as affordable, acceptable, and beneficial both economically and environmentally. Respected, credible third-party spokespeople are often used to communicate reliable information about renewable energy, as illustrated by their experiences in purchasing and installing systems. Case studies are developed to further illustrate these messages.

The ICF Consulting staff also works closely with editors, writers, and producers to generate stories that reiterate the key messages through various angles, and that reach target audiences through a wide range of print, online, and broadcast media. These will be obtained through:

- Interviews with campaign spokespeople,
- Articles with the byline of campaign spokespeople, and
- Press releases on timely topics.

The target audiences—homeowners and commercial-building owners and managers—receive their news from many different places. The ICF Consulting firm included the following broad-spectrum media in its campaign:

- Daily and weekly newspapers
- Newspaper supplements (e.g., house and garden, energy, real estate)
- Wire services
- National news magazines (e.g., Time, Newsweek)
- Business publications (local, state, regional)
- Industry-specific publications (national, state-wide)
- Radio and television news and talk programs (national and local network, cable)
- Newsletters
- Web outlets
- Internet e-zines

Along with new messages, the ICF Consulting team developed a new graphic look for the Renewable Energy Program, which was incorporated into new and existing outreach materials. These materials display the new campaign slogan, "*Harness the Power All Around Us*" that is highlighted on a new booth display for trade shows, meetings, and special events. New technology fact sheets were developed for renewable energy, small wind, solar PVs,

biomass, geothermal, and fuel cells. Two new brochures about the state tax credit for installing a solar electric system and the new Solar Schools Program were also created. The consultant also developed a new folder-style brochure for the Emerging Buydown Program, designed to display supporting materials such as *Frequently Asked Questions about Photovoltaics and Wind Energy*, consumer buying guides, financing tips, and other materials that can be customized for various audiences. These ICF measures are effective because they include a clipping service and video monitoring service vendor to help track the placement of all print and broadcast coverage.

The ICF Consulting team assists the Energy Commission in developing partnerships with entities and organizations active in the renewable energy arena. To this end, the consultant established the Renewable Energy Alliance, a voluntary partnership program designed to facilitate the sharing of resources among the Energy Commission and alliance members in promoting better understanding and awareness of renewable energy. A resource kit for alliance members includes copies of all Energy Commission fact sheets and ordering information, public service advertisements, web banners, a ready-to-use press release, case studies, a list of renewable energy organizations, contacts and events, and copies of videos. Alliance members can update their binders as new and updated information becomes available.

The Energy Commission and ICF Consulting are working with representatives of the Hearst Castle® Visitor Center to develop a showcase project highlighting energy efficiency and renewable energy technologies. The goal of the project is to create a public showcase and use the renewable energy systems at the Visitor Center to raise awareness about renewable energy.

For details about the public awareness campaign during this reporting period, please refer to Appendix E in the *Annual Project Activity Report on the Renewable Energy Program* on the Energy Commission's website at [www.energy.ca.gov/renewables/documents]. The ICF Consulting team plans to develop additional new materials and outreach strategies for the public awareness campaign in the upcoming FY; these will be discussed in the next *Annual Project Activity Report.*

Events

With assistance from ICF Consulting, the Energy Commission participated in numerous fairs, workshops, presentations, and outreach activities throughout the state in FY 2001-2002. The Energy Commission co-sponsored Solfest in Hopland, California for the third year in August 2001 by exhibiting the Renewable Energy Program booth and conducting two workshops on the Emerging Renewables Buydown Program.

Information and materials were also distributed at the Solar Home Tours conducted statewide over three weekends in October 2001 and in San Diego in May 2002.

The Energy Commission staff represented the Renewable Energy Program at UPEx ’01, a four-day solar PV conference held in Sacramento in October 2001. The staff participated in

educational workshops and presented its display booth at the event, which was hosted by the Solar Electric Power Association and co-sponsored by the Energy Commission.

The consultant and the Energy Commission participated in and exhibited its booth at Home and Garden shows in both Santa Clara and San Diego. The staff also participated at the Total Building Expo in San Francisco in April 2002, distributing renewable energy information and speaking with over 100 commercial building owners, property managers, and engineers.

With support from the ICF Consulting team, Energy Commission staff participated in four Earth Day events throughout California in April 2002 – Berkeley (April 20), San Diego (April 21), Los Angeles (April 20-21) and Santa Barbara (April 21). The staff distributed information and answered questions about renewable energy and the Emerging Renewables Buydown Program at these events. The consultant facilitated media coverage for the April 2002 grand opening of Bren Hall on the Campus of the University of California at Santa Barbara. Bren Hall, recognized by the US Green Building Council as one of the best examples in the country of sustainable design, showcases a 47 kW PV system on its roof. The ICF Consulting staff developed a video news release that was aired by 15 local TV stations and numerous others outside of the state.

The Energy Commission staff also exhibited at the Pacific Coast Builders Conference, held in June 2002 at the Moscone Center in San Francisco. Over 24,000 building industry professionals attended this popular event. The staff distributed information about renewable energy technologies and their benefits and the Emerging Renewables Buydown Program. The staff created and distributed a new flyer on building-integrated PVs for this high-tech audience, which has shown an ever-increasing interest in this new technology.

Other Activities

During FY 2001-2002, the Consumer Education Subaccount, in partnership with the Emerging Renewable Resources Account, provided funding to extend the Clean Power Estimator™ contract and help make the tool more user-friendly. The Consumer Education staff regularly distributes flyers to drive consumers to access the Clean Power Estimator™ website.

In June 2002, Consumer Education staff, in cooperation with iShow® and the Energy Commission's Energy Efficiency Division, developed a series of short videos on solar PV. Each video is three to eight minutes in length and topics include the following:

- "About Photovoltaics – An Overview of PV Technology"
- "Photovoltaic Installation Details"
- "Overview of the Buydown Program"

The videos profile various residential and commercial PV applications and include interviews with PV owners. These videos can be viewed at [http://cec.ishow.com].

With support from technical support contractors, the staff is developing a *Photovoltaics Maintenance and Troubleshooting Guide*. PV industry experts have reviewed the draft guide and the Energy Commission expects a final report in early 2003. This guide will be distributed to consumers who participated in the Buydown program and installed a PV system or upon request to anyone interested in learning how to care for a PV system.

The Energy Commission's website contains all fact sheets, consumer guides, and Consumer Education marketing materials, including many that grant recipients have developed, which can be found at [www.energy.ca.gov/renewables/marketing/index.html]. The staff encourages industry partners to distribute these materials to consumers by making them available in small bulk quantities upon request by calling (800) 555-7794.

Endnotes

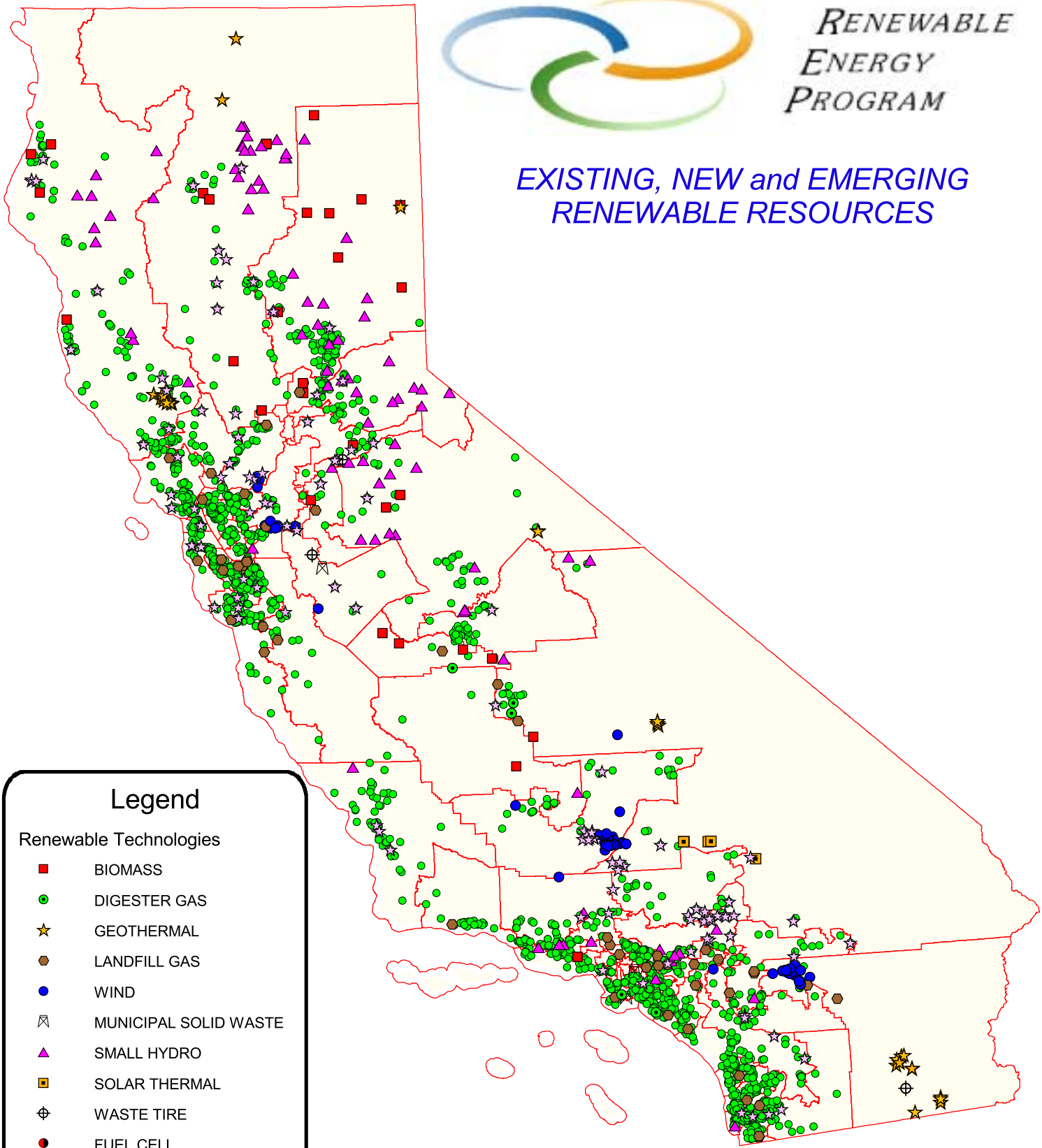
[1] California Energy Commission Publication Number P500-97-002, March 1997.
[2] California Energy Commission Publication Number P500-00-022, June 2001.
[3] Includes $15 million transferred from the General Fund to the Emerging Account pursuant to AB 29X, but does not include $196,000 collected from Bear Valley Electric Company ratepayers.
[4] As of 6/30/02, the total amount disbursed from the Emerging Account is $41.9 million. The difference is due to a lag between disbursements and project-level record updates.
[5] Public Utilities Code §383.5, subdivision (g) authorizes reallocation of funds among accounts. In some cases, the actual amount of funds reallocated will depend upon project needs and status. For example, the Energy Commission has decided to reallocate up to $80 million of unused funds from the Existing Account to the New Account for purposes of funding additional auctions. The results of the auctions and the availability of funds awarded in previous auctions will determine the amount of funds actually reallocated.
[6] Assembly Bill 29X directed that $15 million be deposited in the Emerging Renewable Resources Account from the General Fund, and that $15 million be transferred to the Emerging Account from another account in the Renewable Resource Trust Fund. To fulfill the latter directive, the Energy Commission approved the reallocation of $15 million from the Existing Account to the Emerging Account in May 2001. This figure does not include the $15 million in additional funds placed in the Emerging Renewable Resources Account from the General Fund.
[7] Total includes payments made to 17 wind facilities after 6/30/02 for generation that occurred during FY 01/02. These payments were delayed pending the Energy Commission's receipt of adequate third-party verification of project generation, and therefore were not included in the cumulative payment total shown in the Renewable Energy Program's Quarterly Report to the Legislature dated July 2002.
[8] California Energy Commission publication number P500-00-014V1.
[9] The value of the market-clearing price used in calculating the payment is currently the weighted seasonal average short-run avoided energy cost (SRAC) specific to each of the three major IOUs (PG&E, SCE, and SDG&E). Thus, the market-clearing price for facilities located in PG&E's service territory can be different than the market-clearing price for facilities located in the service territories of SCE or SDG&E.
[10] This incentive rate is calculated by taking the funds available divided by generation submitted, then modifying that value to account for differences in the SRAC price between PG&E, SCE, and SDG&E.
[11] California Energy Commission Publication number P500-01-014V2A, Fourth Edition, April 2002.
[12] See Footnote 5.
[13] California Energy Commission Publication number P500-97-012, Third Edition, September 2000.
[14] PG&E, SCE, SDG&E, and Bear Valley Electric Company.

[15] Conditions and restrictions are outlined in *Volume 3: Emerging Renewable Resources Account Guidebook*. During the 2001-2002 fiscal year, this guidebook was revised in September 2001 (Seventh Edition) and December 2001 (Eighth Edition).
[16] Energy Commission Publication Number P500-01-013V3, Ninth Edition, September 2002.
[17] Assembly Bill 29X directed that $15 million from the General Fund be placed in the Emerging Account, and that $15 million be re-directed from another Renewable Resource Trust Fund Account (the Energy Commission determined that the latter would be re-directed from the Existing Account). Of this $30 million, AB 29X required that $8 million be allocated to customers of municipal utilities.
[18]California Energy Commission publication number P500-01-014V4, September 2001.
[19] "California Mix" refers to net system power. Retail providers may identify a resource mix for their product that is identical to or different from the California Mix.
[20] On December 20, 2000, the Commission allowed for the wholesale trading of renewable attributes to qualify for the customer credit, assuming that a matching amount of commodity energy is sold under a direct access contract and that all other program requirements are met.
[21] A wholesaler buys electricity and sells it to providers or acts as a broker in negotiating power sales to providers.
[22] California Public Utilities Commission Decision (D.) 01-09-060.
[23] Most companies offering renewable products relied upon the Power Exchange for a pricing index.
[24] Renewable Energy Study, California Energy Commission Publication Number P-500-02-016, November 2001.

CALIFORNIA ENERGY COMMISSION

RENEWABLE ENERGY PROGRAM

EXISTING, NEW and EMERGING RENEWABLE RESOURCES



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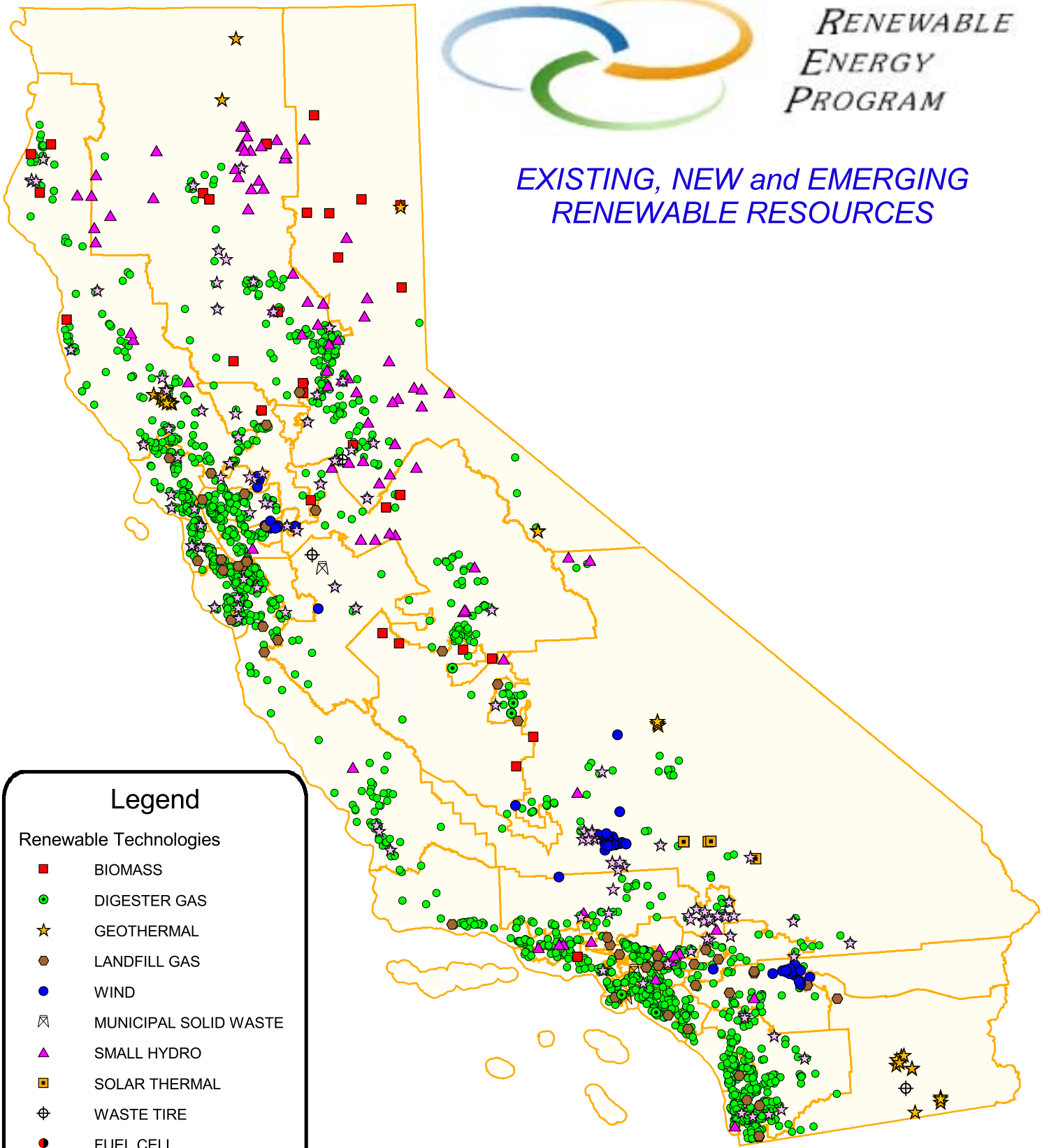
CALIFORNIA ENERGY COMMISSION

RENEWABLE ENERGY PROGRAM

EXISTING, NEW and EMERGING RENEWABLE RESOURCES



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